WHAT WORKS

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Gender Equality by Design

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To Michael, Dominik, and Luca
and
Ruth, Paul, and Brigitte
ILY

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Part Four

HOW TO DESIGN DIVERSITY

WHAT WORKS

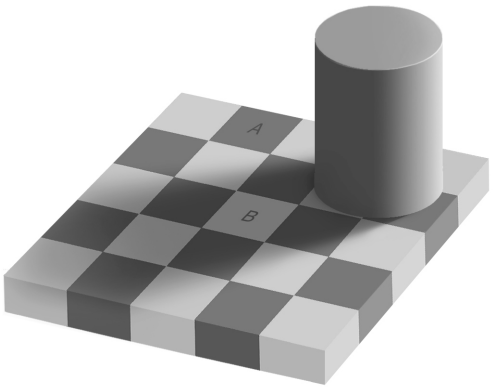
The Promise of Behavioral Design

As late as 1970, only 5 percent of musicians performing in the top five orchestras in the United States were women. Today, women compose more than 35 percent of the most acclaimed orchestras, and they play great music. This did not happen by chance. Rather, it required the introduction of blind auditions. The Boston Symphony Orchestra was the first to ask musicians to audition behind a screen, and in the 1970s and 1980s most other major orchestras followed suit. When they did so, usually in preliminary rounds, it raised the likelihood that a female musician would advance by 50 percent and substantially increased the proportion of women hired.[1]

In theory, an orchestra director cares about the sounds coming out of the bassoon, the flute, and the trumpet, not the ethnicity or sex of the person playing the instrument. In practice, the Vienna Philharmonic, for example, admitted its first female player in 1997. Not so long ago. Orchestra directors and selection committees were quite comfortable with all-male, all-white orchestras and likely not aware of their biases. To change this, no great

technological feat was required, just awareness, a curtain, and a decision. Or, more precisely, a design decision. A simple curtain doubled the talent pool, creating amazing music and transforming what orchestras look like. But why did it take so long?

Consider the following image and compare squares A and B. What do you see?

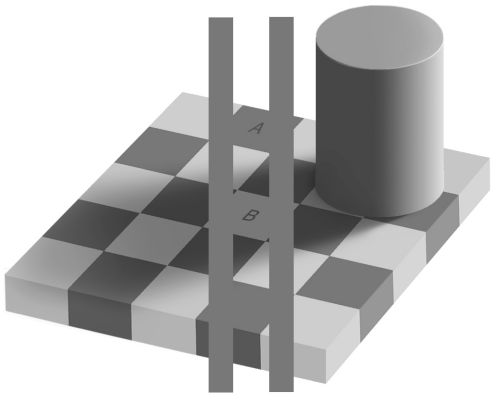


Checkershadow illusion, part 1.

Most people see square B as being lighter than square A. It turns out that this is an illusion. Your mind made sense of the pattern it saw, a checkerboard. You put squares into categories, dark and light, and put them in order: light squares next to dark squares. You may also have taken the shadow into account and made sure it did not trick you into not seeing a pattern that you knew had to be there.

Consider the same checkerboard now, with square B isolated. Note that squares A and B in fact have the same color. They are

both dark. By blocking some of the checkerboard, we allowed your mind to see square B for what it is—another dark square. It no longer had to be in a certain category and obey certain rules. It was liberated from the patterns we expect, just as curtains liberated orchestra selection committees. Professional musicians typically are quite shocked when they learn how much they are influenced by visual cues. A recent series of experiments showed that competition judges consciously value sound as central to their decision. Only the experimental evidence shows them that, in fact, they are instead relying heavily on visual cues.[2]



Checkershadow illusion, part 2.

Consider another, quite different example. A study examining the parole rulings of Israeli judges found that they ruled far more leniently right after meal breaks. Differing degrees of leniency were the unintended consequence of hunger, fatigue, the depletion of cognitive resources—and design. Just prior to taking a

break, the judges reverted to the easy solution: the status quo. After a break, they were more deliberative. The timing and number of breaks the judges took—the design—had unintentional consequences. Bad designs, whether consciously or unconsciously chosen, lead to bad outcomes. Bias is built into our practices and procedures, not just into our minds. Here is our opportunity.[3]

This book's goal is to offer good designs to you; designs that make it easier for our biased minds to get things right. Based on research evidence, we can change the environments in which we live, learn, and work. My principal focus here is the stubborn, costly problem of gender inequality, but the recommendations I make stem from a wealth of research about decisions and behavior that go well beyond gender. The book takes as a given that people make mistakes; they make them often and (sometimes) unknowingly. As a consequence, these mistakes reduce everyone's well-being. The solutions I recommend come from the field of behavioral economics—putting up screens, timing breaks well, and dozens of more and less complicated interventions—all building on insights into how our minds work. My invitation to you is to become a behavioral designer—because it works, because it often is rather easy and inexpensive, and because it will start to level the playing field and give everyone greater opportunity to thrive.

Much like interior designers or landscape architects, behavioral designers create environments to help us better achieve our goals. They do not define goals, but they help us get there. Referred to as "choice architecture" in Richard Thaler and Cass Sunstein's path-breaking book *Nudge,* behavioral design goes beyond law, regulation, or incentives, although it acknowledges that these are and will remain important. But they do not always work. Based

on 41 million observations for the population of Denmark, for example, research shows that tax subsidies have only a tiny impact on savings. Such incentives require people to take action and respond—which 85 percent of Danes fail to do. In contrast, behavioral designs that do not rely on people reacting to incentives but instead employ automatic mechanisms—such as automatic employer contributions to retirement accounts—do much better. They substantially increased the amount of money retirees have available. We do not always do what is best for ourselves, for our organizations, or for the world—and sometimes, a little nudge can help.[4]

A simple curtain transformed what orchestras look like and doubled the talent pool. Benefiting from 100 percent talent is good business for orchestras and just about every other organization. Careful timing of breaks allows judges to make decisions more accurately and fairly. To the business case, then, we must add the moral case: behavioral design is the right thing to do.

There is no design-free world. Organizations have to decide how to search for and select future employees. How they advertise open positions, where they post the job openings, how they evaluate applicants, how they create a short list, how they interview candidates, and how they make their final selections are all part of choice architecture. Why not design a bit more thoughtfully, increasing the chances that the best people are hired?

This book will show you how. Our research suggests, for example, that asking hiring managers to explicitly compare a given candidate with real alternatives makes evaluators focus on individual performance instead of stereotypes. Comparing two or more job candidates helps evaluators calibrate their judgments—without having to rely on an internal stereotype as a measuring rod. As

academic dean of the Kennedy School of Government, I introduced this and other insights shared in this book to the faculty hiring and promotion procedures at Harvard University.

It bears repeating that design is everywhere. We constantly make choices about how to present information, structure interviews, or create teams, and we live day in, day out with the consequences of those choices. Whether or not employees are asked to "opt in" or "opt out" of a pension plan might well determine whether or not they have enough money to enjoy retirement. How your company hires and promotes might well determine bottom-line performance. By changing the design, we change the outcome: good design can lead to positive outcomes—nudge by nudge. We begin by uncovering the root causes for certain behaviors and designing interventions accordingly. These root causes include one difficult truth: no one is immune from biases.

A few years ago I entered a day-care center at my workplace, Harvard University. I had our young son in my arms. Like millions of parents who have taken their child to a caregiver for the first time, I was extremely anxious. One of the first teachers I saw was—a man. I wanted to turn around and run. How could I entrust this *man* with the most precious thing in my life? He did not conform to my expectation of what a loving, caring, and nurturing preschool teacher looked like. My reaction was not based on a conscious thought process, but rather on something deep in my gut. Was I being sexist? I fear the answer is yes.

Thankfully, I overcame my biased snap judgment, the teacher proved great, and he became a trusted caregiver. But to this day my gut reaction bothers me. Only about 10 to 20 percent of the elementary school teachers in the United States and many other countries are male. These men face an uphill battle. Just as in or-

chestras, there is likely an untapped talent pool of elementary school teachers. What is more, society's failure to draw on that pool of talent matters. A 2015 study by the Organisation for Economic Co-operation and Development (OECD) finds that at age fifteen, boys are 50 percent more likely than girls to lack basic proficiency in reading, mathematics, and science. The presence of male role models can impact what boys believe possible and important for themselves: seeing is believing.

Stereotypes serve as heuristics—rules of thumb—that allow us to process information more easily, but they are often inaccurate. What is worse, stereotypes describing how we believe the world to be often turn into prescriptions for what the world should be. Much psychological research shows that we cannot help but put people (and other observations) into categories. It rarely is a conscious thought process that informs our thinking about demographic groups. Rather, when we learn the sex of a person, gender biases are automatically activated, leading to unintentional and implicit discrimination.[5]

Through behavioral design we can move the needle toward creating equal opportunities for female musicians, for male teachers, and for everyone else. Good design often harvests low-hanging fruit, left on the tree not so much because of bad intentions but rather because of the mind bugs that affect our judgment. Behavioral design offers an additional instrument for our collective toolbox to promote change; it complements other approaches focusing, for example, on equal rights, education, health, agency, or on policies making work and family compatible.

Much has been written about the "business case" for gender equality, and research continues to accumulate. One clear insight is that the answer to what degree closing gender gaps yields

economic returns is difficult to determine if outcomes are based on flawed decision processes. Take the example of orchestras. I presume that orchestras benefited from the introduction of blind auditions because curtains allowed evaluators to choose the best performers and build the best team—which also increased the fraction of women.

It is a trivial point but one largely overlooked in the literature. Whether or not the share of women and men in groups, say, corporate boards, is related to company performance does not depend only on the percentage of each gender on the board but also on how the board members, women and men, are chosen, how the boards are organized, and what the rules of engagement and decision making are. Gender equality is not just a numbers game. Numbers matter, but how those numbers came to be and how they work with each other is quite possibly even more important.

Still, we have learned a lot about the business case for gender equality. A recent study measuring the impact of an increase in the talent pool on the US economy between 1960 and 2008 found that aggregate output per worker had grown by 15 to 20 percent due to an improved allocation of talent. For example, while in 1960 the effective talent pool for doctors and lawyers consisted of white men—94 percent of all doctors and lawyers in the United States were white men—this had changed dramatically by 2008, when the fraction of white male doctors and lawyers had decreased to 62 percent. Casting the net more widely, including women and African, Asian, Hispanic, and Native Americans, had paid off.[6]

Leveling the playing field to include more women in the labor force is of vital economic importance for various countries. Consider Japan. The OECD estimates that if it does nothing to in-

crease the labor force participation rates of its women, and these remain at their 2011 levels of 63 percent for women and 84 percent for men, the country's labor force will shrink by more than 10 percent during the next twenty years. In contrast, if Japan achieved gender parity in its labor force, its gross domestic product (GDP) would increase by almost 20 percent over the next twenty years. High returns as a result of women's economic inclusion is not just a Japanese phenomenon but generally shared by countries with low fertility rates, including Germany, Italy, Singapore, South Korea, and Spain, among others.[7]

A simulation assuming that women are completely excluded from the labor force found that this would lead to income per capita losses of almost 40 percent. Using labor market data for 126 countries from the International Labor Organization (ILO) to calculate the actual gender gaps in workforce participation (as well as in self-employment and pay if available) in various regions of the world, the total income losses are largest (27 percent) in the Middle East and North Africa. In addition, for an increasing number of countries, the talent argument has gained importance as the gender gap in education has reversed and more women than men graduate from college. In the United States, for example, more than half of bachelor's degrees have been held by women since the mid-1980s, and by the early twenty-first century, almost 60 percent of bachelor's degree holders were female.

While economists still debate the exact magnitude of the impact of increasing women's labor-force participation on GDP, we can safely agree with Christine Lagarde, managing director of the International Monetary Fund (IMF), that "excluding women simply makes no economic sense—and including women can be a tremendous boon to the 21st century global economy."[8]

On a micro-level, women have been found to put money to more productive use than men in several cases. In Ivory Coast, for example, there are "male" and "female" crops. Men grow coffee, cocoa, and pineapple; women grow plantains, bananas, coconuts, and vegetables. In years where the men's crops have high yields, research shows, households spend more money on alcohol and tobacco. When the women have good harvests, in contrast, more money is spent on food. In the United States, interesting micro-evidence on the relevance of women's inclusion stems from laboratory experiments measuring a group's "collective intelligence" across a variety of tasks. Gender-diverse teams scored more highly on collective intelligence than all-male or all-female teams. Importantly, a group's collective intelligence was only moderately related to members' individual intelligence, suggesting that a gender diverse team can indeed be more than the sum of its parts.[9]

While the macro- and the micro-evidence hold the promise of a business case, gender equality is not a magic bullet automatically leading to economic progress. This is why, at the end of the day, the case of gender equality must rest on a moral argument. It just is the right thing to do. Full stop.[10]

We cannot afford to get it wrong. In the most extreme case, getting it wrong is a matter of life and death. The United Nations estimates up to 200 million women and girls are missing worldwide as a result of sex-selective abortion, infanticide, neglect during the first five years, gendered violence, and discrimination later in life. This selective killing of members of a particular sex, referred to as "gendercide," might well be the greatest human rights tragedy in history. If the same number of females were "missing" in the United States, America would be a men-only country. Nick Kristof

and Sheryl WuDunn remind us that this number exceeds all the men killed on the battlefield in all twentieth-century wars.

While horrendous by itself, gendercide has further consequences. In January 2010, the Chinese Academy of Social Sciences calculated that in 2020, one in five Chinese men would not be able to find a bride. The Academy expects a surplus of about 30 to 40 million young men without marriage prospects in 2020—which corresponds to nearly the whole young male population in the United States. A low female-to-male ratio has been shown to lead to an expansion of the marriage market by decreasing the age of brides, hampering their educational attainment and economic opportunities. It has also been linked to an increase in trafficking of girls, domestic violence, honor killings, and other crime.[11]

A problem that many fear too big to even start addressing inspired an amazing experiment by Rob Jensen, a former colleague and now professor at the Wharton School of the University of Pennsylvania. He examined what impact seeing economic opportunities for women in rural India had on how parents treated their daughters. Jensen exploited the fact that the business process outsourcing industry grew rapidly in India during the 1990s and created a significant number of new jobs, in particular for women. With the help of a recruitment firm, he provided three years of recruitment services to women in randomly selected rural villages. He then compared whether these women were more likely to work than their counterparts in control villages. Jensen also investigated whether this translated into a change in how parents treated their daughters. Indeed, the recruitment services significantly increased employment among women (without affecting

men). In addition, in the villages chosen to receive recruitment services, girls aged five to fifteen experienced a substantial improvement in health and were significantly more likely to be in school.

Seeing women work in call centers allowed parents to imagine a different future for their own daughters. While the number of women newly working in call centers was relatively small (an increase of 2.4 percentage points), even this small possibility challenged parents' beliefs and their stereotypes about what women could accomplish.[12]

Behavioral design can affect faculty hiring in Cambridge, Massachusetts, and create counterstereotypical role models in rural villages outside of New Delhi, India. These are just two of the places where these insights are helping people get it right for themselves, their organizations, and the world. A tall order, you might think. I do not deny conflicts of interest or trade-offs in this book. Some games are zero-sum, and your gain will indeed be my loss. But not every game ends with a winner and a loser. Many games are positive sum, and here behavioral design is less like playing chess and more like dancing. We can improve girls' health, education, and opportunities in India without harming those of boys. And we can select job candidates in organizations across the world based on individual performance rather than group stereotypes, increasing both efficiency and equality.

How can we know that a particular design is effective? We can try different strategies and measure their impact. We can examine the effectiveness of behavioral design much like we evaluate the impact of a new drug, running a clinical trial in which people, schools, or even villages are randomly assigned to treatment or control groups. The goal of random assignment is to create groups that are as identical as possible, so that any change in be-

havior can be attributed to the "treatment." Indeed, much of the evidence discussed in this book will be based on such randomized controlled trials, allowing us to create a causal pathway from the design intervention to the outcome.

Thankfully, experimentation is becoming increasingly popular. More and more governments are designing policy interventions in collaboration with social science researchers, allowing them to evaluate their impact. Corporations are using advanced technologies and social media to test different marketing strategies and human resource practices. And nongovernmental organizations are running scientifically valid experiments to explore how to decrease homelessness or recidivism most effectively. Still, we should do more. At all levels, we need to create learning environments where people are encouraged to try out something new, possibly fail, and then learn from it.

This fear of trying new things and failing is a real constraint. It is also the one that I had underestimated most. Learning is my business and, naively, I expected everyone to be keen on uncovering past mistakes and improving their decision making. However, in some organizations, acknowledging past errors is risky. Thus, while the CEO or the president might be enthusiastic about discovering mistakes and piloting a new idea, managers at all levels might well feel threatened. To circumvent this, governments and corporations must create safe spaces for experimentation where mistakes are taken as an opportunity to learn.

In this book, I offer dozens of opportunities to try something new. These interventions mostly relate to gender, but sometimes I draw on research examining how to promote equality for other traditionally disadvantaged groups. Some of the same design features that level the playing field between men and women can

also inform our thinking about other groups. But while we should learn from each other, from research on race in the United States or castes in India, we need to be mindful that findings do not automatically generalize. Rather, evidence from one field should serve as an invitation to experiment with similar design features in another.

Despite media attention paid to general issues of race and gender, we still know relatively little about the intersection between different social categories—for example, to what degree evidence on white women also applies to African, Asian, Hispanic, or Native American women. Similarly, the research on faltering academic achievement among boys and men, and what to do about it, is relatively young. A series on gender, education, and work in the *Economist* in the spring of 2015 highlights the challenges poorly educated men in the United States and elsewhere face. They are falling behind not only in school but also in work and society more generally. The series calls for a "change in cultural attitudes": "Men need to understand that traditional manual jobs are not coming back, and that they can be nurses or hairdressers without losing their masculinity."[13]

Bias hurts counterstereotypical individuals across gender, race, class, ethnicity, nationality, or caste. Consider this. Simulations show that even a tiny bias in performance evaluations can lead to huge disparities in representation at the highest levels. Assuming the typical corporate pyramid structure where only a few make it to the top, and holding everything else constant, one simulation found that a bias accounting for only 1 percent of the variance in evaluation scores led to only 35 percent of the discriminated-against group being represented at the top. Without the bias, each group would have held 50 percent of these seats.[14]

Going with your gut can have real effects. The first part of the book explores this further. It helps us better understand the problem—why gender bias is so prevalent and why it is hard to overcome by training alone. It explores approaches focused on de-biasing mindsets through diversity training and on helping women navigate the system, compete more effectively, negotiate more assertively, and lead more strategically. Women need to know how and when to "lean in" as Sheryl Sandberg eloquently described in her book. But a review of women's empowerment initiatives suggests that women will not be able to do it alone.[15]

The remainder of the book focuses on the solutions behavioral design offers. The second part introduces new designs for talent management. It is devoted to the importance of evidence, continuing the theme of experimentation but also arguing for improved data collection by gender and the use of big data. One of the more recent applications of big data has been in the area of *people analytics.* Generally, people analytics argues that we can learn more about, say, a given job applicant's likelihood of leaving the firm within the first year by analyzing the characteristics of current leavers and stayers than by clever tests or intricate interviews with the candidate. Replacing intuition, informal networks, and traditional rules of thumb with quantifiable data and rigorous analysis is a first step toward overcoming gender bias. Successful for-profit and not-for-profit organizations such as Credit Suisse, Goldman Sachs, Google, LinkedIn, Microsoft, and Teach for America increasingly run their HR departments like they run their finance or marketing departments, based on evidence. Some now refer to them as "people analytics departments."[16]

We also need to scrutinize the messages we send to people who consider joining our organizations. Do we attract the right or the

wrong ones? Who opts in and who opts out? Is there gender bias in how we advertise job openings and describe the qualifications and characteristics we look for in a future employee? Do schools and universities encourage a broad set of applications or do we, consciously or unconsciously, send messages that deter certain groups of people from applying? Insights into gender differences in preferences for, say, competition or uncertainty, and self-stereotypes regarding aptitude for certain subjects, disciplines, or jobs help shape the signals we send, increasing the chances that people perceive the opening as an invitation to apply.

Much more can be done. The third part of the book dissects the environments in which people live, learn, and work for unintended biases. Are the portraits that hang in the hallways of your organizations only of past male leaders? Know that this is impacting what employees or students believe possible for themselves. Stereotypes can be activated by the most subtle cues, including whether or not test-takers are asked to check off boxes indicating their sex or race before taking a test. Stereotypes prescribing that Asians outperform whites in math, and girls do better than boys in reading and writing can become self-fulfilling prophecies—unless we de-bias how we do things.

Finally, in addition to redesigning how we manage talent and craft school and work environments, we can also apply behavioral insights to make diversity work better. The fourth part of the book shows that contact with other social groups can change stereotypical beliefs and help people collaborate across groups. But not all groups are created equally. Having a "critical mass" of every subgroup represented in a team has been shown to be crucial to team success. Success is also promoted by the use of specific design principles defining the rules of engagement or decision-

making. By choosing the "right numbers" and the "right procedures," you can help teams perform better.

These are some of the tools and techniques, often low-hanging fruit, behavioral design offers to improve our classrooms and boardrooms, tests and performance evaluations, hiring and promotions, and policy- and decision-making. Based on evidence from experimental studies in most cases, this book shows that small changes can have surprising effects. Big data improves our understanding of what is broken and needs fixing, blind or comparative evaluation procedures help us hire the best instead of those who look the part, and role models shape what people think is possible. Building on what works, behavioral design creates better and fairer organizations and societies. It will not solve all our gender-related problems, but it will move the needle, and often at shockingly low cost and high speed.

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